

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Molnupiravir Capsule Formulation

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 04/06/2024  |
| 7.0     | 07/06/2024     | 6199216-00013 | Date of first issue: 08/24/2020 |

### SECTION 1. IDENTIFICATION

Product name : Molnupiravir Capsule Formulation

#### Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc  
Address : 126 E. Lincoln Avenue  
Rahway, New Jersey U.S.A. 07065  
Telephone : 908-740-4000  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Pharmaceutical  
Restrictions on use : Not applicable

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

Specific target organ toxicity : Category 1 (Gastrointestinal tract)  
- repeated exposure (Oral)

#### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.  
H372 Causes damage to organs (Gastrointestinal tract) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**  
P260 Do not breathe dust, fume, gas, mist, vapors or spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
**Response:**  
P314 Get medical attention if you feel unwell.  
**Disposal:**  
P501 Dispose of contents and container to an approved waste disposal plant.

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### Other hazards

Dust contact with the eyes can lead to mechanical irritation.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

| Chemical name | CAS-No.      | Concentration (% w/w)      |
|---------------|--------------|----------------------------|
| Cellulose     | 9004-34-6    | $\geq 23.5$ - $\leq 84.75$ |
| Molnupiravir  | 2492423-29-5 | $\geq 8.75$ - $\leq 70$    |

## SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.

In case of eye contact : If in eyes, rinse well with water.  
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : Causes damage to organs through prolonged or repeated exposure if swallowed.  
Dust contact with the eyes can lead to mechanical irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

## SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Metal oxides

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.  
Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).  
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### SECTION 7. HANDLING AND STORAGE

Technical measures : Static electricity may accumulate and ignite suspended dust causing an explosion.  
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Do not breathe dust, fume, gas, mist, vapors or spray.  
Do not swallow.  
Avoid contact with eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Minimize dust generation and accumulation.  
Keep container closed when not in use.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.

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Version 7.0      Revision Date: 07/06/2024      SDS Number: 6199216-00013      Date of last issue: 04/06/2024  
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Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents  
Self-reactive substances and mixtures  
Organic peroxides  
Explosives  
Gases

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

| Components   | CAS-No.      | Value type<br>(Form of exposure) | Control parameters / Permissible concentration | Basis     |
|--------------|--------------|----------------------------------|------------------------------------------------|-----------|
| Cellulose    | 9004-34-6    | TWA                              | 10 mg/m <sup>3</sup>                           | ACGIH     |
|              |              | TWA (Respirable)                 | 5 mg/m <sup>3</sup>                            | NIOSH REL |
|              |              | TWA (total)                      | 10 mg/m <sup>3</sup>                           | NIOSH REL |
|              |              | TWA (total dust)                 | 15 mg/m <sup>3</sup>                           | OSHA Z-1  |
|              |              | TWA (respirable fraction)        | 5 mg/m <sup>3</sup>                            | OSHA Z-1  |
| Molnupiravir | 2492423-29-5 | TWA                              | 20 µg/m <sup>3</sup> (OEB 3)                   | Internal  |
|              |              | Wipe limit                       | 200 µg/100cm <sup>2</sup>                      | Internal  |

**Engineering measures** : All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.  
Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).  
Minimize open handling.

#### Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide

# SAFETY DATA SHEET

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|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hand protection          | adequate protection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Material                 | : Chemical-resistant gloves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Remarks                  | : Consider double gloving.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Eye protection           | : Wear safety glasses with side shields or goggles.<br>If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.<br>Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.                                                                                                                                                                                           |
| Skin and body protection | : Work uniform or laboratory coat.<br>Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.<br>Use appropriate degowning techniques to remove potentially contaminated clothing.                                                                                                                                                                                                              |
| Hygiene measures         | : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.<br>The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls. |

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                         |                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------|
| Appearance                              | : solid                                                                           |
| Color                                   | : white to off-white                                                              |
| Odor                                    | : No data available                                                               |
| Odor Threshold                          | : No data available                                                               |
| pH                                      | : No data available                                                               |
| Melting point/freezing point            | : No data available                                                               |
| Initial boiling point and boiling range | : No data available                                                               |
| Flash point                             | : Not applicable                                                                  |
| Evaporation rate                        | : Not applicable                                                                  |
| Flammability (solid, gas)               | : May form explosive dust-air mixture during processing, handling or other means. |
| Flammability (liquids)                  | : Not applicable                                                                  |

# SAFETY DATA SHEET

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|                                                  |   |                                                          |
|--------------------------------------------------|---|----------------------------------------------------------|
| Upper explosion limit / Upper flammability limit | : | No data available                                        |
| Lower explosion limit / Lower flammability limit | : | No data available                                        |
| Vapor pressure                                   | : | Not applicable                                           |
| Relative vapor density                           | : | Not applicable                                           |
| Relative density                                 | : | No data available                                        |
| Density                                          | : | No data available                                        |
| Solubility(ies)<br>Water solubility              | : | No data available                                        |
| Partition coefficient: n-octanol/water           | : | Not applicable                                           |
| Autoignition temperature                         | : | No data available                                        |
| Decomposition temperature                        | : | No data available                                        |
| Viscosity<br>Viscosity, kinematic                | : | Not applicable                                           |
| Explosive properties                             | : | Not explosive                                            |
| Oxidizing properties                             | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight                                 | : | No data available                                        |
| Particle characteristics<br>Particle size        | : | No data available                                        |

### SECTION 10. STABILITY AND REACTIVITY

|                                    |   |                                                                                                                            |
|------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : | Not classified as a reactivity hazard.                                                                                     |
| Chemical stability                 | : | Stable under normal conditions.                                                                                            |
| Possibility of hazardous reactions | : | May form explosive dust-air mixture during processing, handling or other means.<br>Can react with strong oxidizing agents. |
| Conditions to avoid                | : | Heat, flames and sparks.<br>Avoid dust formation.                                                                          |
| Incompatible materials             | : | Oxidizing agents                                                                                                           |
| Hazardous decomposition products   | : | No hazardous decomposition products are known.                                                                             |

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Components:

##### Cellulose:

|                           |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| Acute oral toxicity       | : LD50 (Rat): > 5,000 mg/kg                                                  |
| Acute inhalation toxicity | : LC50 (Rat): > 5.8 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity     | : LD50 (Rabbit): > 2,000 mg/kg                                               |

##### Molnupiravir:

|                     |                                                    |
|---------------------|----------------------------------------------------|
| Acute oral toxicity | : LD0 (Rat): 2,000 mg/kg<br>LD0 (Dog): 2,000 mg/kg |
|---------------------|----------------------------------------------------|

#### Skin corrosion/irritation

Not classified based on available information.

#### Components:

##### Molnupiravir:

|         |                                       |
|---------|---------------------------------------|
| Species | : reconstructed human epidermis (RhE) |
| Method  | : EpiDerm                             |
| Result  | : Mild skin irritation                |

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

##### Molnupiravir:

|         |                        |
|---------|------------------------|
| Species | : Bovine cornea        |
| Result  | : No eye irritation    |
| Method  | : Bovine cornea (BCOP) |

#### Respiratory or skin sensitization

##### Skin sensitization

Not classified based on available information.

# SAFETY DATA SHEET

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### Respiratory sensitization

Not classified based on available information.

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Cellulose:

|                       |   |                                                                                                                                                      |
|-----------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative                                                                               |
|                       |   | Test Type: In vitro mammalian cell gene mutation test<br>Result: negative                                                                            |
| Genotoxicity in vivo  | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative |

#### Molnupiravir:

|                                     |   |                                                                                                                                                                          |
|-------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro               | : | Test Type: Ames test<br>Result: positive                                                                                                                                 |
|                                     |   | Test Type: Micronucleus test<br>Test system: human lymphoblastoid cells<br>Result: negative                                                                              |
| Genotoxicity in vivo                | : | Test Type: Micronucleus test<br>Species: Rat<br>Cell type: Bone marrow<br>Application Route: Oral<br>Result: negative                                                    |
|                                     |   | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Rat<br>Cell type: Bone marrow<br>Result: equivocal            |
|                                     |   | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Transgenic rat<br>Application Route: Oral<br>Result: negative |
| Germ cell mutagenicity - Assessment | : | Weight of evidence does not support classification as a germ cell mutagen.                                                                                               |

### Carcinogenicity

Not classified based on available information.

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| 7.0     | 07/06/2024     | 6199216-00013 | Date of first issue: 08/24/2020 |

### Components:

#### **Cellulose:**

|                   |   |           |
|-------------------|---|-----------|
| Species           | : | Rat       |
| Application Route | : | Ingestion |
| Exposure time     | : | 72 weeks  |
| Result            | : | negative  |

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### **Reproductive toxicity**

Not classified based on available information.

### Components:

#### **Cellulose:**

|                      |   |                                                       |
|----------------------|---|-------------------------------------------------------|
| Effects on fertility | : | Test Type: One-generation reproduction toxicity study |
|                      |   | Species: Rat                                          |
|                      |   | Application Route: Ingestion                          |
|                      |   | Result: negative                                      |

|                              |   |                                                  |
|------------------------------|---|--------------------------------------------------|
| Effects on fetal development | : | Test Type: Fertility/early embryonic development |
|                              |   | Species: Rat                                     |
|                              |   | Application Route: Ingestion                     |
|                              |   | Result: negative                                 |

#### **Molnupiravir:**

|                              |   |                                                                                                    |
|------------------------------|---|----------------------------------------------------------------------------------------------------|
| Effects on fetal development | : | Test Type: Embryo-fetal development                                                                |
|                              |   | Species: Rat                                                                                       |
|                              |   | Application Route: Oral                                                                            |
|                              |   | Developmental Toxicity: LOAEL: > 200 mg/kg body weight                                             |
|                              |   | Symptoms: Effects on embryofetal and postnatal development.                                        |
|                              |   | Result: No effects on fertility and early embryonic development were detected.                     |
|                              |   | Remarks: Not classified due to data which are conclusive although insufficient for classification. |

### **STOT-single exposure**

Not classified based on available information.

### **STOT-repeated exposure**

Causes damage to organs (Gastrointestinal tract) through prolonged or repeated exposure if swallowed.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Molnupiravir Capsule Formulation

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 04/06/2024  |
| 7.0     | 07/06/2024     | 6199216-00013 | Date of first issue: 08/24/2020 |

### Components:

#### **Molnupiravir:**

|                    |                                                                   |
|--------------------|-------------------------------------------------------------------|
| Routes of exposure | : Oral                                                            |
| Target Organs      | : Gastrointestinal tract                                          |
| Assessment         | : Causes damage to organs through prolonged or repeated exposure. |

### **Repeated dose toxicity**

### Components:

#### **Cellulose:**

|                   |                      |
|-------------------|----------------------|
| Species           | : Rat                |
| NOAEL             | : $\geq 9,000$ mg/kg |
| Application Route | : Ingestion          |
| Exposure time     | : 90 Days            |

#### **Molnupiravir:**

|               |               |
|---------------|---------------|
| Species       | : Rat         |
| LOAEL         | : 2,000 mg/kg |
| Exposure time | : 7 d         |
| Target Organs | : Stomach     |

|               |                                                                             |
|---------------|-----------------------------------------------------------------------------|
| Species       | : Dog                                                                       |
| LOAEL         | : 300 mg/kg                                                                 |
| Exposure time | : 7 d                                                                       |
| Target Organs | : Gastrointestinal tract                                                    |
| Symptoms      | : tachycardia, decreased activity, decrease in appetite, Diarrhea, Vomiting |

|               |             |
|---------------|-------------|
| Species       | : Rat       |
| NOAEL         | : 500 mg/kg |
| Exposure time | : 28 d      |

|               |                                                                           |
|---------------|---------------------------------------------------------------------------|
| Species       | : Dog                                                                     |
| NOAEL         | : 6 mg/kg                                                                 |
| LOAEL         | : 17 mg/kg                                                                |
| Exposure time | : 28 d                                                                    |
| Target Organs | : Gastrointestinal tract                                                  |
| Symptoms      | : decreased activity, Gastrointestinal tract damage, decrease in appetite |

### **Aspiration toxicity**

Not classified based on available information.

### **Experience with human exposure**

### Components:

#### **Molnupiravir:**

|                     |                                                    |
|---------------------|----------------------------------------------------|
| General Information | : Symptoms: Headache, Gastrointestinal disturbance |
|                     | Remarks: The most common side effects are:         |

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



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|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 04/06/2024  |
| 7.0     | 07/06/2024     | 6199216-00013 | Date of first issue: 08/24/2020 |

Symptoms: Back pain

### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### **Cellulose:**

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

##### **Molnupiravir:**

Toxicity to algae/aquatic plants : EC10 (Raphidocelis subcapitata (freshwater green alga)): 89 mg/l  
End point: Growth  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : EC10 (Pimephales promelas (fathead minnow)): 5.8 mg/l  
Exposure time: 32 d  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): > 8.8 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
Remarks: No toxicity at the limit of solubility.

Toxicity to microorganisms : EC10: 143.1 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition of activated sludge  
Method: OECD Test Guideline 209

#### Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

#### Persistence and degradability

##### Components:

##### **Cellulose:**

Biodegradability : Result: Readily biodegradable.

##### **Molnupiravir:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 81 %  
Exposure time: 28 d  
Method: OECD Test Guideline 314

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Molnupiravir Capsule Formulation

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### Bioaccumulative potential

#### Components:

##### **Molnupiravir:**

Partition coefficient: n-octanol/water : log Pow: -0.534  
pH: 7

### Mobility in soil

#### Components:

##### **Molnupiravir:**

Distribution among environmental compartments : OECD Test Guideline 106  
log Koc: 1.45

### Other adverse effects

No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with local regulations.  
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **UNRTDG**

Not regulated as a dangerous good

#### **IATA-DGR**

Not regulated as a dangerous good

#### **IMDG-Code**

Not regulated as a dangerous good

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### Domestic regulation

#### **49 CFR**

Not regulated as a dangerous good

### Special precautions for user

Not applicable

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



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### SECTION 15. REGULATORY INFORMATION

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Combustible dust  
Specific target organ toxicity (single or repeated exposure)

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### US State Regulations

##### Pennsylvania Right To Know

|                         |              |
|-------------------------|--------------|
| Cellulose               | 9004-34-6    |
| Molnupiravir            | 2492423-29-5 |
| Croscarmellose sodium   | 74811-65-7   |
| Hydroxypropyl cellulose | 9004-64-2    |

##### California Permissible Exposure Limits for Chemical Contaminants

|           |           |
|-----------|-----------|
| Cellulose | 9004-34-6 |
|-----------|-----------|

#### The ingredients of this product are reported in the following inventories:

|       |                  |
|-------|------------------|
| AICS  | : not determined |
| DSL   | : not determined |
| IECSC | : not determined |

### SECTION 16. OTHER INFORMATION

#### Further information

# SAFETY DATA SHEET

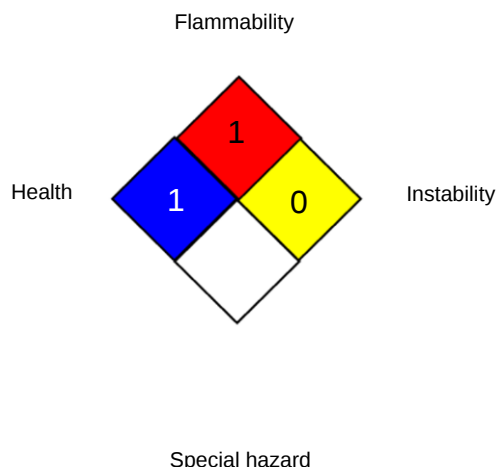
according to the OSHA Hazard Communication Standard



## Molnupiravir Capsule Formulation

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 04/06/2024  |
| 7.0     | 07/06/2024     | 6199216-00013 | Date of first issue: 08/24/2020 |

### NFPA 704:



### HMIS® IV:

|                 |   |   |
|-----------------|---|---|
| HEALTH          | * | 3 |
| FLAMMABILITY    |   | 3 |
| PHYSICAL HAZARD |   | 0 |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

|                 |   |                                                                                           |
|-----------------|---|-------------------------------------------------------------------------------------------|
| ACGIH           | : | USA. ACGIH Threshold Limit Values (TLV)                                                   |
| NIOSH REL       | : | USA. NIOSH Recommended Exposure Limits                                                    |
| OSHA Z-1        | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants          |
| ACGIH / TWA     | : | 8-hour, time-weighted average                                                             |
| NIOSH REL / TWA | : | Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| OSHA Z-1 / TWA  | : | 8-hour time weighted average                                                              |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic sub-

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stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 07/06/2024

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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US / Z8